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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Satoshi Tamano

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EXAMINER

BOR, HELENE CATHERINE

ART UNIT

PAPER NUMBER

3768

MAIL DATE

DELIVERY MODE

06/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/563,086	Applicant(s) TAMANO ET AL.	
	Examiner HELENE BOR	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-10,12,15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-10,12,15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 15 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner was unable to find support for the subject matter regarding the number of elements in the array divided by the second predetermined number equals an integer. The Specification and the Drawings appear to lack support for the subject matter.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With two elements being utilized for the second predetermined number: the number of ultrasound wave transmission and reception and number of vibrator elements. The result is confusion over the last lines of the claim regarding which of the two claim elements the line is referring.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claim 1-2, 4, 6-10, 12 & 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gondo (US Patent No. 5,349,960) and further in view of Bates (US Patent No. 5,787,049) in order to expedite prosecution the Examiner has reviewed the claim as best understood by the Examiner.

Claim 1-2, 7-10, 12 & 15-16: Gondo teaches the use of an ultrasonic diagnosing apparatus for measuring blood flow within a living body and displaying the blood stream in superposition on an ultrasonic image (Col. 1, Line 7-12). Gondo teaches a first predetermined number of vibrator elements are disposed in an array at the tip of the insert section around entire 360 degree outer circumference (Col. 9, Line 67 – Col. 10, Line 2). Gondo teaches a connection change over switch (Figure 9, Element 4) which changes over electrical connection of first predetermine number of vibrator elements among the first predetermined number of vibrator elements to be connected with the second predetermined number of ultrasonic wave transmission and reception channels (Figure 11, Element 2-i & Col. 10, Line 34-62). Gondo teaches that the change over switch is disposed within the probe section (Figure 9, Element 1 & 4). Gondo teaches the vibrator elements assigned a consecutive ID number (Figure 9, Element 2-N, 2-1, 2-2). Gondo teaches the time delays/intervals are set changeable (Col. 11, Line 19-24). Gondo teaches the tomogram, blood flow image computing circuits and image selection (Col. 11, Line 48-59, Col. 9, Line 31-36 & Figure 9, Element 46 & 47). Gondo teaches

Art Unit: 3768

delay times distributed in a symmetric manner with reference to the center (Col. 6, Line 49-60, Col. 10, Line 63 – Col. 11, Line 2 & Figure 7A, Element 28a). Gondo teaches successive scanning of the elements from 2-1 to 2-N (Col. 10, Line 34-63 & Col. 11, Line 7-16). Gondo does not teach the specific scanning as claimed however, the device of Gondo is capable of performing the scan as it contains all the structural elements to do so (Figure 9, Element 1, 4 & 16 & Col. 10, Line 34-63). Gondo fails to teach the second predetermined number being smaller than the first predetermined number. however, Bates teaches second predetermined number being smaller than the first predetermined number (Col. 2, Line 12-15) in order to reduce cost per channel (Col. 1, Line 24-36). It would have been obvious to one of ordinary skill in the art to modify the system of Gondo to include the connections as taught by Bates in order to reduce cost per channel (Col. 1, Line 24-36).

Claim 4: Gondo teaches wherein the delay time of the ultrasonic wave signals are set unchanged [constant speed] (Col. 12, 15-19)

Claim 6: Gondo teaches ultrasonic diagnostic apparatus that covers about 90 degrees [60 degrees] over the circumferential face at the tip of the insert section (Figure 10A & Col. 11, Line 5-7)

Response to Arguments

7. Applicant's arguments, see Page 10, filed 03/10/2009, with respect to the Specification Objection, 35 USC § 112, second paragraph rejection, Claim Objection have been fully considered and are persuasive. The 35 USC § 112, second paragraph rejection and objections of the Claims and Specification has been withdrawn.

Art Unit: 3768

8. Applicant's arguments filed 03/10/2009 with regard to the 35 USC § 112, first paragraph have been fully considered but they are not persuasive. The Applicant stated that the amendments to Claim 15 overcome the 35 USC § 112, first paragraph rejection. However, Examiner respectfully disagrees. The amendments to Claim 15 and to the Specification did not resolve the issue of the Specification lacking the subject matter (as discussed in the rejection above) was unable to find within the amendments to the Specification and claims.

9. Applicant's arguments with respect to claim 1-2, 4, 6-10, 12 and 15-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 3768

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELENE BOR whose telephone number is (571)272-2947. The examiner can normally be reached on M-T 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long V. Le can be reached on (571)272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. B./
Examiner, Art Unit 3768

/Eric F Winakur/
Primary Examiner, Art Unit 3768